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Presentation to Virginia Executive Order 57 Work Group

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Serving District of Columbia, Delaware, Maryland,
New Jersey, Pennsylvania, Virginia & West Virginia

Mission: To save lives by improving lung health and preventing lung disease

Vision: A world free of lung disease

Active nationally, and in all 50 states.

State of the Air Report

What's the *State of Your Air?*

For 16 years, the American Lung Association has analyzed data from official air quality monitors to compile the State of the Air report. The more you learn about the air you breathe, the more you can protect your health and take steps to make our air cleaner and healthier.

Report Card: *What's the Grade for Your Air?*

Search by Zip Code:

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Key Findings

More than 4 in 10 people live where pollution levels are too often dangerous to breathe.

City Rankings

Which cities have the highest levels of air pollution? Which are the cleanest?

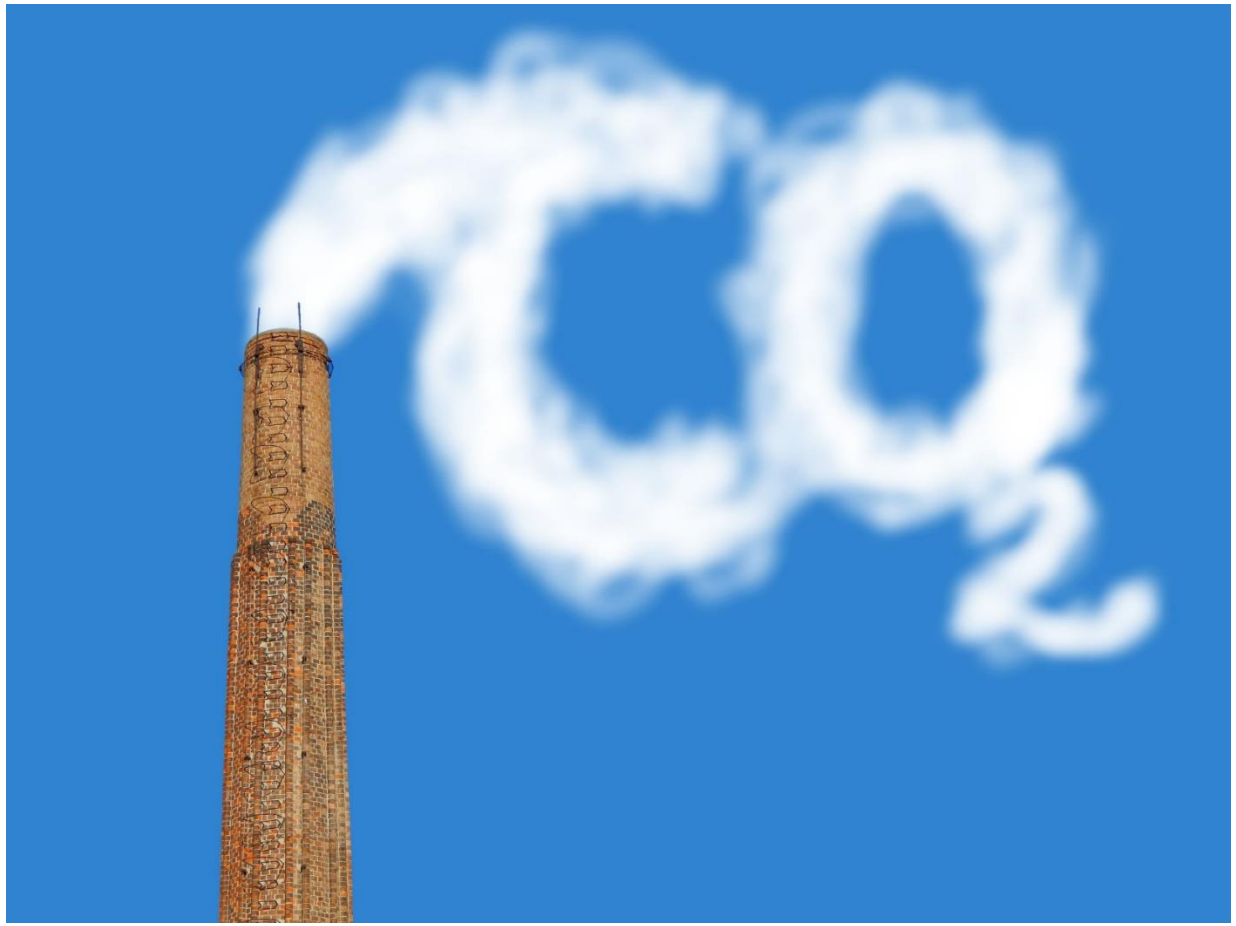
Health Risks

Ozone and particle pollution are the most widespread pollutants—and among the most dangerous.

Our Fight

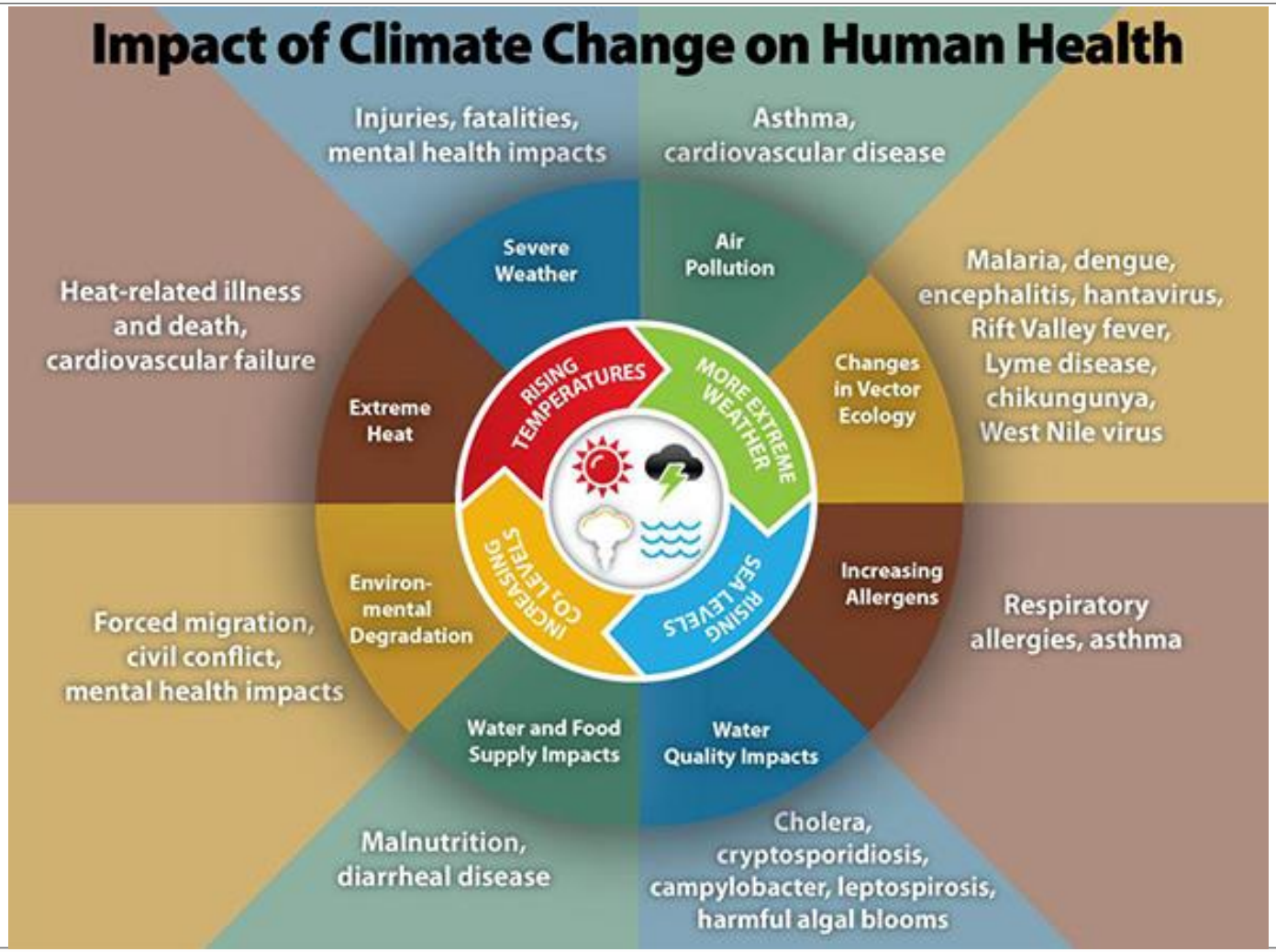
We fight because dirty air harms our health and can threaten life itself.

Climate Change and Human Health



1. Carbon pollution drives climate change.
2. Climate change harms human health.
3. Reducing carbon pollution helps protect public health – directly and by providing “co-benefits.”

U.S. Centers for Disease Control and Prevention



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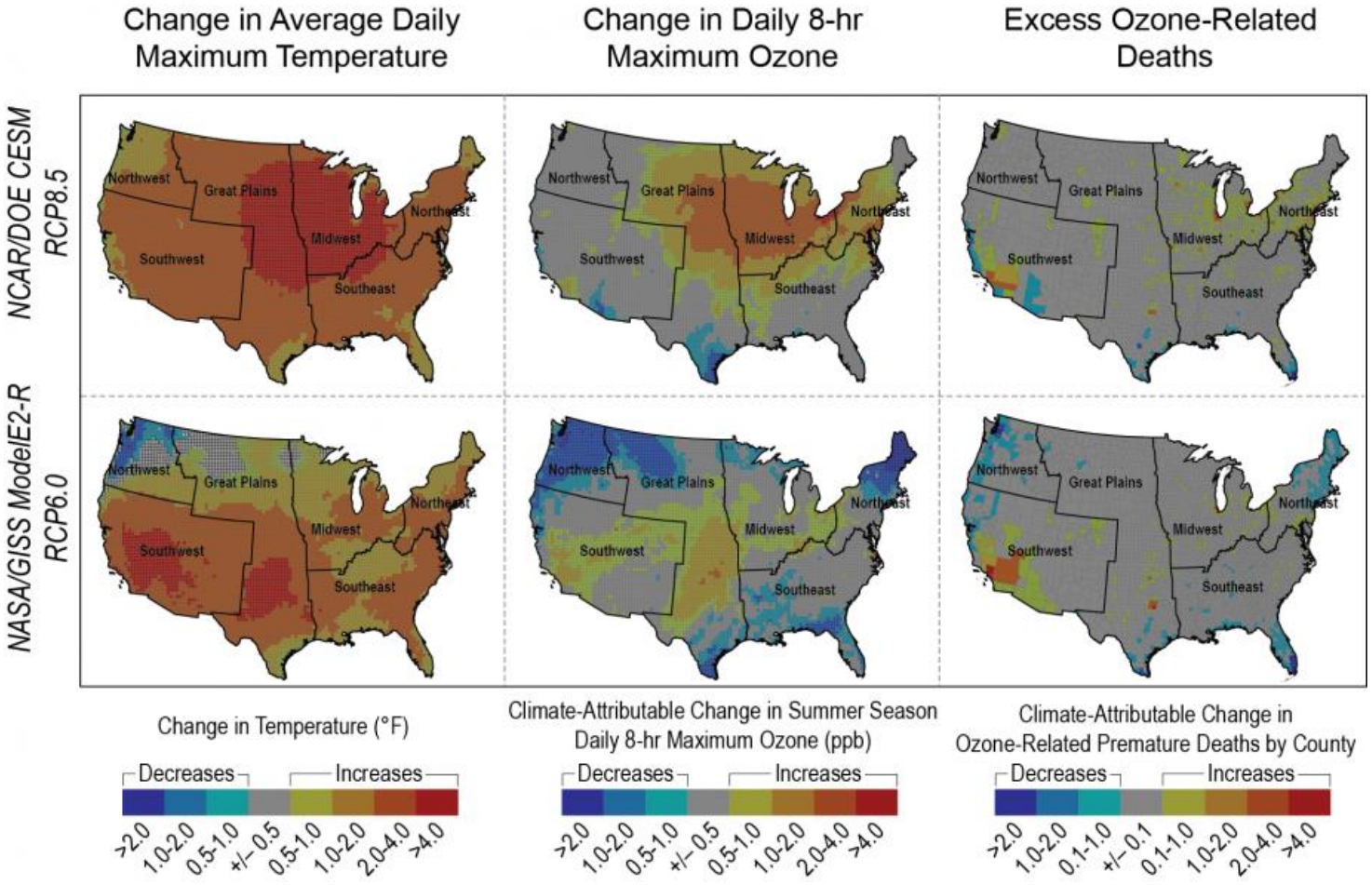
Climate and Health Assessment (USGCRP, 2016)

Climate change will make it harder to continue our nation's progress in the fight against air pollution:

- Warmer temperatures are projected to increase conditions for ground-level ozone or "smog" in large parts of the U.S.
- Increased wildfires mean more particulate matter pollution and precursors to ozone pollution.



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Who is at risk from climate change and air pollution?

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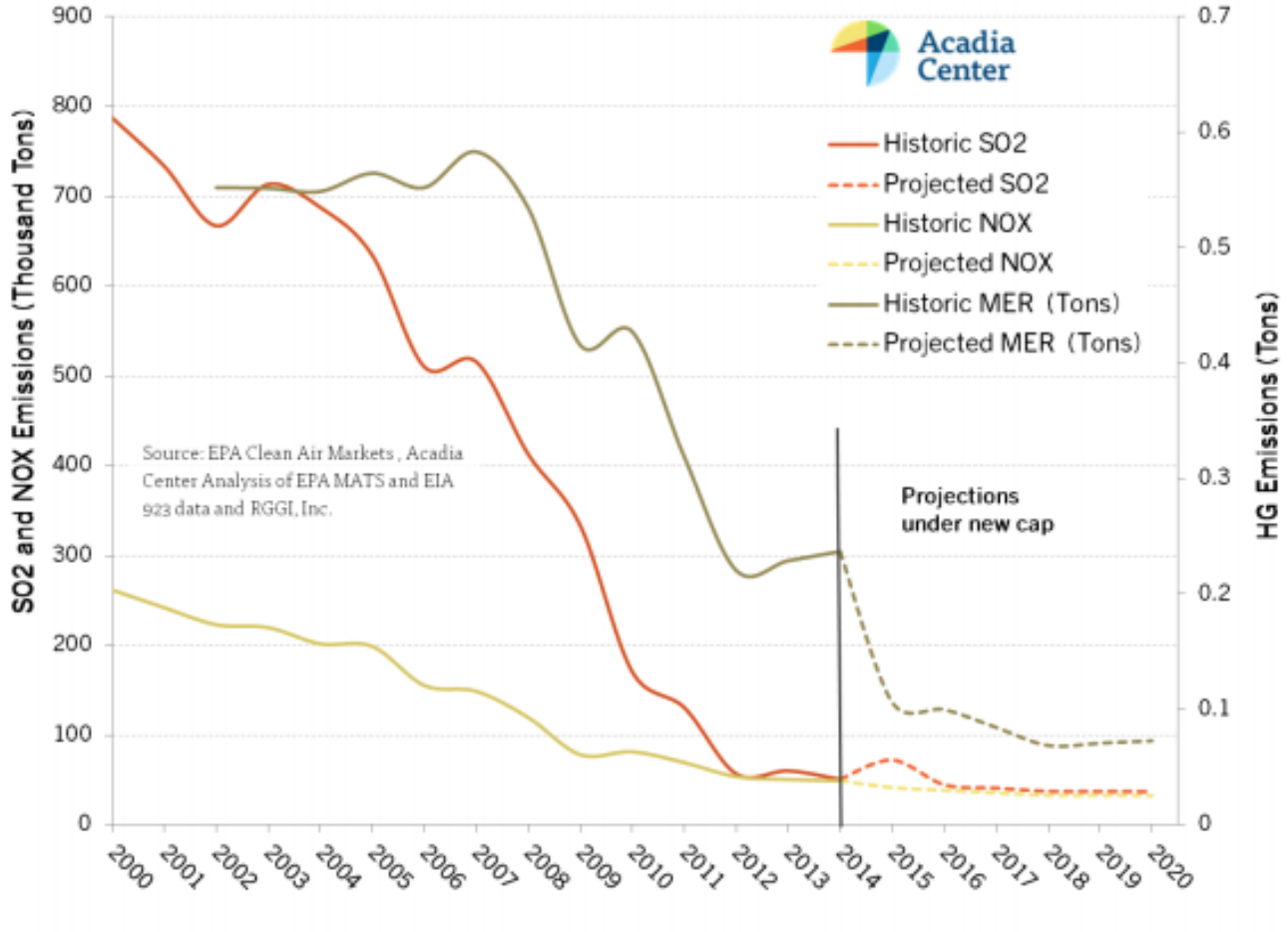
RGGI: Health Co-Benefits of Reducing Carbon Pollution

Figure 2: Reduction of Hazardous Pollution



A study by the Acadia Center in 2015 looked at air pollution reduced under the Regional Greenhouse Gas Initiative (RGGI) and found:

- Harmful sulfur dioxide, nitrogen oxides, and mercury all dropped alongside carbon emissions during the program
- Reductions in sulfur dioxide and nitrogen oxides saved nearly $11 billion in health costs and premature deaths avoided between 2009-2014
- Not all of the reductions were due to RGGI, but carbon limits helped drive these reductions.
- Did not address “hotspots” concern.

Health Benefits of Reducing Carbon Pollution

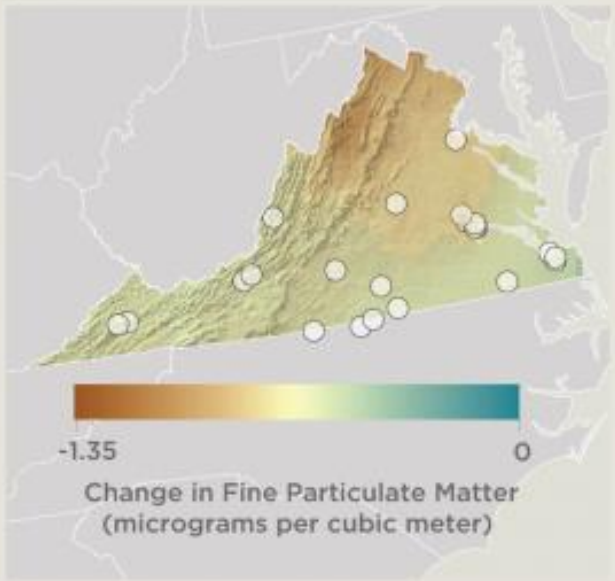
- Harvard/Syracuse/Boston Univ. study found that a strong program to reduce power plant carbon pollution would reduce air pollution (ozone and PM 2.5) substantially.
  - All states and communities see improved air quality
  - National health benefits include:
    - 3,500 premature deaths avoided in 2020
    - 1,000 hospital admissions from heart/lung disease avoided in 2020
  - VA among the top 12 states for premature deaths avoided

VIRGINIA: A Health Benefits Hotspot

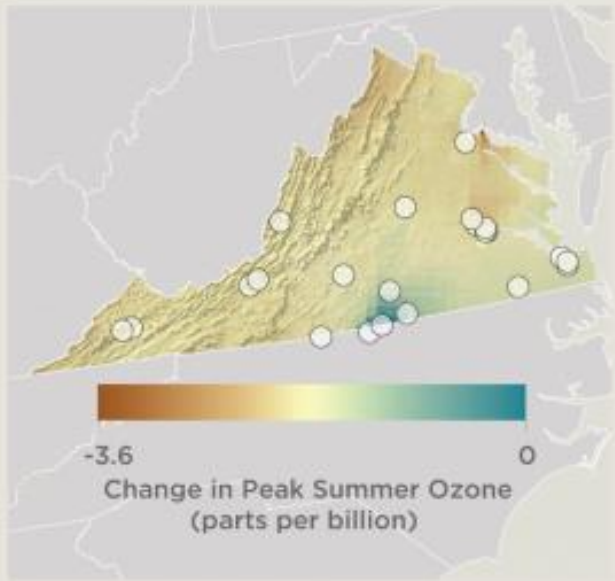
AIR QUALITY AND HEALTH BENEFITS OF A POWER PLANT CARBON STANDARD

VIRGINIA'S AIR

SOOT Reduced in 2020



SMOG Reduced in 2020



○ Operating Coal Plants

VIRGINIA'S HEALTH

Cumulative Lives Saved from 2020 to 2030

1200

Cumulative Hospitalizations Prevented from 2020 to 2030

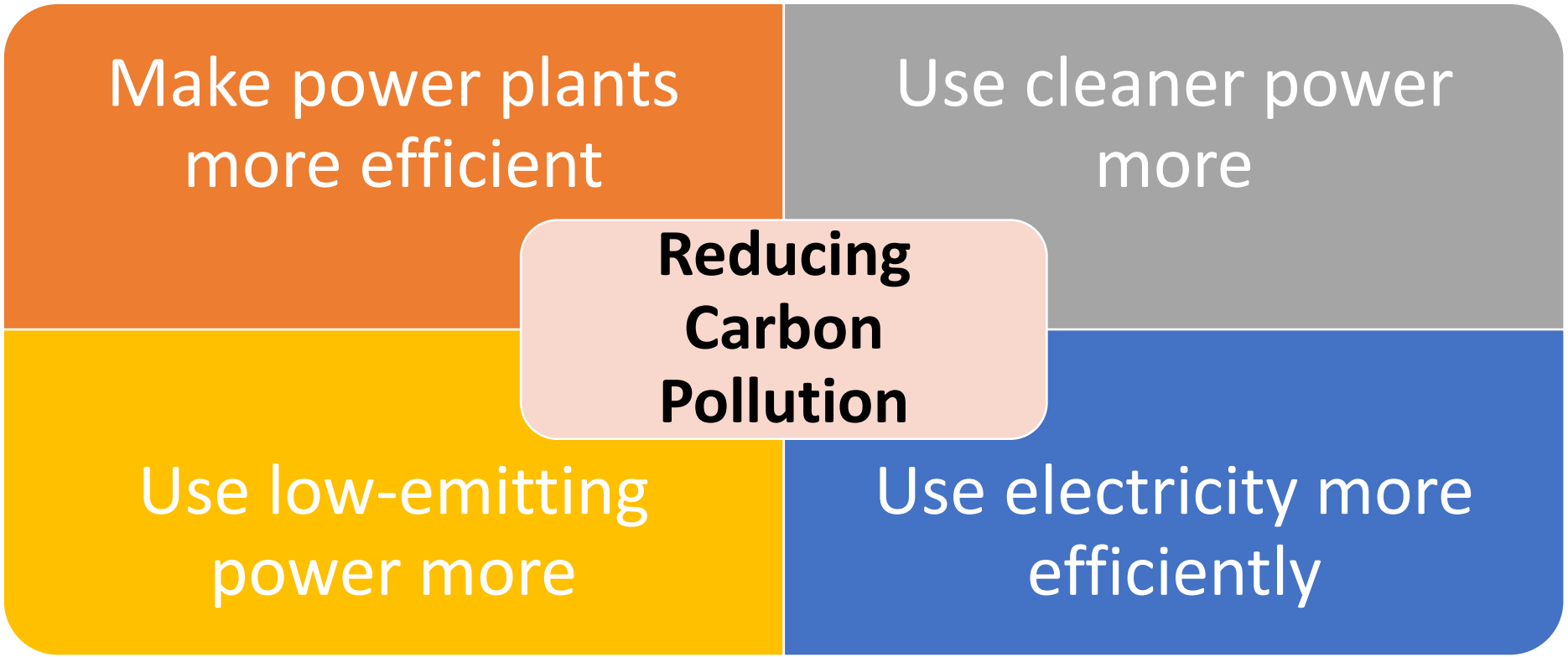
340

Cumulative Heart Attacks Prevented from 2020 to 2030

80

THESE MAPS SHOW: Reductions in fine particulate matter and peak summer ozone, and the resulting health benefits under Policy Scenario 2 compared to the 2020 reference case. For soot and smog, negative values = lower pollution. The health benefits assume a linear increase from the 2020 annual estimate. By comparison, Scenario 1 resulted in 50 additional premature deaths, and Scenario 3 resulted in 1100 lives saved. Source: *Health Co-benefits of Carbon Standards for Existing Power Plants*. www.chgeharvard.org/health-co-benefits.

Reducing carbon pollution



Avoiding Unintended Health Consequences

- Requirements and incentives should be created to identify and reach out to communities that face greater risk or burdens from climate change, including low-income communities and communities of color, as well as communities living near sources of pollution.
- Pollution trading schemes can create pollution “hot spots” and disproportionately burdened communities might not experience health benefits (and may see increased health burden). Care must be taken to ensure that each plant takes steps to reduce pollution to protect neighboring communities.
- Reject increased reliance on biomass, which can increase pollution that triggers asthma attacks and causes premature death.

Thank you.